

REMARKS

In the outstanding Office Action, claims 1 and 2 were presented for examination. Claims 1 and 2 were rejected on formal grounds under 35 U.S.C. §112. In addition, rejection was advanced on the basis of 35 U.S.C. §102 against claims 1 and 2 as being anticipated by a reference to Roller.

The Office Action has been most carefully studied. In this amendment applicant has canceled claims 1 and 2 without prejudice, and has added new claims 3-10 more particularly pointing out the invention. The new claims have been carefully written to avoid any questions under 35 U.S.C. §112, in accordance with the guidelines and requirements set forth in the outstanding Office Action. Accordingly, as will be discussed in detail below, it is believed that the application is clearly in condition for allowance.

Abstract

The abstract has been amended to overcome the minor objection thereto.

Claim Amendments

New base claim 3 has been written to define subject matter previously defined in or inherent in now-canceled claim 1, without narrowing. New claims 4-10 each depend from claim 3.

Claim Rejections - 35 U.S.C. §112 Second Paragraph

The rejections under 35 U.S.C. §112 second paragraph have been carefully considered and are believed to have been avoided in the writing of new claims 3-10.

Claim Rejections - 35 U.S.C. §102(b) Anticipation

The invention as now claimed in new claim 3 provides a novel protector for the vertical support posts of a safety rail barrier for vehicles of the type used along

highways, along dangerous sections of local roads, such as on curves and at intersections, and in other suitable places. Such safety rail barriers typically comprise a stamped sheet rail which may have a small number of horizontal corrugations running parallel to the roadway, which rail is supported on a plurality of metallic channel-shaped support posts. The posts are fixed into the ground and can have any one of a number of different cross-sections, for example a double-"T"-section (or "I" section), a "U"-, a "V" or other suitable section. The safety rail is supported above the ground on the posts with a separation between the lower edge of the rail and the ground. This standard arrangement exposes a portion of each of the vertical posts to possible ground-sliding contact by an accident victim. As described in the specification, the result of a high-momentum impact of a motorcyclist's head or other anatomy of an accident victim's body moving at considerable speed with the angular structure of the exposed post can inflict devastating injury and may even be fatal.

To solve this problem, the invention provides a simple, low cost, easily installed protector for the exposed post portion which is designed to absorb the shock of impact and reduce the consequent injuries. As claimed in new claim 3, which essentially defines subject matter previously claimed in, or inherent in, now-canceled claim 1, without narrowing, the protector comprises an integral body having an extruded profile. The integral body is configured to surround a respective support post except for a vertically open section into which the support post can be received. This structure permits assembly and placement of the protector around the support post. Also, the integral body has a sinuous internal configuration which permits the integral body to attach itself to the support post.

Furthermore, the integral body has a sinuous internal configuration to attach the integral body to the support post. In addition, the integral body has multiple internal partitions that define cells, or "alveoli" to use the term employed in applicant's specification. The partitions and cells provide an internal structure that is compressible

to absorb shock in the event of impact by an accident victim, for example, if the protector on the support should be struck by the head of a motorcyclist.

The integral body may be of one-piece unitary construction, for example a portion of a continuous extrusion, or may be formed of several pieces effectively secured together to have integrity and to be manipulatable as a single piece for the purposes of the claimed invention. The protector may consist essentially of a single integral body of length appropriate for a respective post to be protected, or of two or more integral components which together have an appropriate length, and optionally may be provided with end caps, or other trim or accessory components.

As is apparent from the embodiment illustrated in applicant's drawings, the integral body may have a "honeycombed" cross-section containing many small units or holes which run the length of the structure and provide a plurality of collapsible channels or pockets.

It will be understood that "vertical" and "vertically" are used in a general sense to include the post dispositions typically found in supports for highway safety rails and the like which are essentially upright but may, due to vagaries of installation and local topography, list at various angles out of a precise vertical direction.

Roller US patent No. 6,494,640, "Roller" relied upon by the Office is believed not remotely relevant to applicant's invention as now claimed in new base claim 3, as will now be explained.

Roller discloses apparatus for protecting structural supports from collision damage inflicted by a moving vehicle. The apparatus comprises a pair of semi-cylindrical components 14, 16, 114 secured together and to the structural support by means such as a belt or strap 18. The two semi-cylindrical components cooperate to

completely surround the support engaging to provide a continuous closed loop wall around the support. Each semicircular component 14, 16, 114 comprises a wall, a top, and a base. The wall surrounds a hollow interior which is free of internal walls or partitions (Figs 2A, 4A). The semi-cylindrical components 14, 16, 114 each have a plurality of impact absorbing indentations 50.

Applicant's claimed protector is easily installed as a simple push fit around the support to be protected. In contrast, Roller's apparatus requires more elaborate attachment by a belt or a strap. Roller does not disclose a protector comprising:

"...an integral body having an extruded profile configured to surround a respective support post except for a vertically open section wherein the support post can be received into the open section permitting assembly and placement of the protector around the support post and wherein the integral body has a sinuous internal configuration to attach the integral body to the support post."

Specifically Roller's individual semi-cylindrical components 14, 16, 114 do not surround the support post and have a sinuous internal configuration to attach the integral body to the support post. Furthermore, a pair of Roller's semi-cylindrical components 14, 16, 114 is not an integral body, lacks a vertically open section and requires further secural means (belt or strap 18) to attach the integral body to the support. Still further, the integral body as defined in applicant's new base claim 3 is extruded having, in one useful embodiment, a more or less constant cross-sectional structure throughout its length. In contrast Roller's protector is described as being produced by rotational molding a more expensive process than economical extrusion. The impact-absorbing indentations 50 of Roller's protector render it unsuitable for production by the economical extrusion process that can be used for applicant's claimed protector. For these several good and meaningful reasons, applicant's base claim 3 is believed clearly and patentably distinguished from Roller.

Roller's apparatus is primarily intended to protect columns and supports from damage while reducing damage to vehicles impacting it, as well, apparently as an afterthought, "damage" to the vehicle driver (column 1, lines 13-16). Roller does not contemplate direct impact between a person and the protective apparatus. Roller's apparatus is likely to be subjected to multiple impacts and is accordingly designed to regain its shape after impact (column 4, lines 32-35).

In contrast, applicant's claimed invention is intended to protect a person, for example an accident victim, from catastrophic injury, to which end the claimed protector, which is a low cost product may be permanently deformed as it absorbs the impact. Roller's disclosure lacks

"a plurality of internal walls and multiple internal partitions, the walls and partitions defining cells and providing a compressible internal structure capable of absorbing shock in the event of impact by an accident victim."

as is required by Applicant's new base claim 3. Accordingly base claim 3 is still further clearly and patentably distinguished from Roller for this meaningful reason.

Roller does not remotely suggest a structure providing the beneficial advantages of applicant's claimed post protector. For example, applicant's claimed invention employs a quite different impact absorption system suitable for cushioning human body impacts which together with effective, easily utilized post mounting structure can be formed in one piece out of one material, if desired. Roller employs several parts with different functions requiring different materials and a relatively elaborate post mounting procedure. Furthermore, applicant's claimed invention can be embodied in a simple structure which is not only easily attached to a safety rail support post, but is also easily removable in contrast to Roller's apparatus which requires disassembly for removal.

In addition, applicant's claimed invention provides an adaptable multi-use system wherein a single design embodiment can be attach to different post configurations, unlike Roller's apparatus which requires a specific internal profile for each post used.

Dependent Claims

Claims 4-10 depend from base claim 3, and are therefore believed allowable with claim 3 for the reasons that claim 1 is believed allowable. Dependent claims 4-10 are furthermore believed clearly and patentably distinguished from the art of record, and therefore allowable, by the additional meaningful limitations they recite.

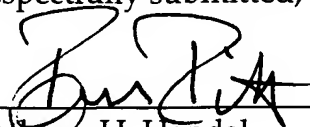
More particularly, claim 4 calls for the integral body to have an injury reducing smooth outer surface, which could be formed, for example of sheet metal and is quite unlike Roller's potentially hazardous contouring. In addition, the integral body claimed in claim 4 provides greater protection for aspects of the support post which are more likely to be impacted; which is not remotely suggested by Roller or any other art known to applicant.

Furthermore, the internal configuration of the integral body defined in claim 7 provides a construction which can be embodied as a snap-fit of the protector to a support post of I-beam ("double-T") configuration, which is not remotely taught or suggested by Roller or any other art known to applicant.

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the instant application, as amended, is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with Applicant's representative would be helpful in the advancement of the prosecution, they are invited to call the telephone number below for an interview.

Respectfully submitted,

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